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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/737,384

12/14/2000

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02/08/2005

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EXAMINER

TRAN, DZUNG D

ART UNIT

PAPER NUMBER

2633

DATE MAILED: 02/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/737,384

Applicant(s)

CAUCHY ET AL.

Examiner

Dzung D Tran

Art Unit

2633

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on amendment filed on

09/23/2004.

2a) ☐ This action is **FINAL**.

2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) 1,4-16,18-20,22-24,26 and 27 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) 1,4-16,18-20,22-24,26 and 27 is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☐ All b) ☐ Some * c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. _____.

3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

DETAILED ACTION

Specification

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 4, 5, 10-11, 16, 18-20, 22-24 and 26-27 are rejected 35 U.S.C. 103(a) as being unpatentable over Lindhorst-Ko U.S. patent no. 6,725,401 in view of Chaudhuri et al. U.S. patent no. 6,587,235.

Regarding claims 16 and 24, Lindhorst-Ko discloses a method and system provide capacity efficient restoration within an optical fiber communication system comprising:

associating a first route (figure 1, element P2) with a first channel of two or more channels (col. 5, lines 45-48) in a first wavelength division multiplex (WDM) link (figure 1, element 6E, col. 6, lines 53-55);

associating a second route with a second channel (figure 5, element P1) of the two or more channels (col. 5, lines 45-48) in the second wavelength division multiplex (WDM) link (figure 1, element 6A, col. 6, lines 53-55);

selecting the second route as a diverse alternate route to re-establish a connection upon failure of the first route, by comparing the first physical link with the second physical link and selecting the second route when the first physical link is

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different from the second physical link (col. 7, line 60 to col. 8, line 18). Lindhorst-Ko differs from claim 16 and 24 of the present invention in that Lindhorst-Ko does not disclose the optical system is a DWDM. Chaudhuri discloses a system provide capacity-efficient restoration within an optical communication system having interface equipment comprise WDM but preferably DWDM (col. 5, lines 49-52) and since it is well recognize in the art that WDM covers 40 or less wavelength channels while DWDM reaches to 120 channels or more. Thus, it would have been obvious to an artisan at the time of the invention was made to include the DWDM in the system of Lindhorst-Ko to take advantage of the unprecedented capacity (i.e. bandwidth) offered by optical fiber and allows a single optical fiber to carry data over a large number of discrete channels.

Regarding claims 4 and 10, Lindhorst-Ko further discloses first physical link identifier (Link 6E) to a first route P2 and a second physical link identifier (Link 6A) to a second route P1, and selecting the alternate route by comparing the first physical link identifier with the second physical link identifier (see figures 1, 1A, col. 7, line 60 to col. 8, line 18).

Regarding claim 20, Lindhorst-Ko discloses a control system 10 that include a processor for monitoring and issuing control commands (col. 6, lines 35-49).

Regarding claim 1, Lindhorst-Ko discloses the communication system further comprising :

associating a first route (figure 1, route 6E, 6D, 6L, 6K) with a first channel of two or more channels (col. 5, lines 45-48) and associating a second route (figure 1,

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route 6A, 6B, 6C, 6L, 6K) with a second channel (col. 5, lines 45-48) in a first wavelength division multiplex (WDM) link (figure 1, element 6E);

associating a third route (figure 1, route 6A, 6B, 6I, 6J) with a third channel of the two or more channels (col. 5, lines 45-48) in the second wavelength division multiplex (WDM) link (figure 1, element 6A) the first physical link is associated with a first physical link identifier 6A and the second physical link is associated with a second physical link identifier 6E ;

selecting the third route as a diverse alternate route to re-establish a connection that used the first route, by comparing the first physical link identifier with the second physical link identifier (e. g. based on the look up table 12, the resource data base 10 switch from link 6E to link 6A when a failure on path P2, see figure 2, col. 7, line 60 to col. 8, line 18).

Regarding claims 18-19, 22-23 and 26-27, Lindhorst-Ko further discloses first physical link identifier (Link 6E) to a first route P2 and a second physical link identifier (Link 6A) to a second route P1; comparing the first physical link identifier with the second physical link identifier (e. g. based on the look up table 12, see figure 2, col. 7, line 60 to col. 8, line 18); and selecting the second route as an alternate route for the first route before the first route fails (e.g. predetermined alternate route, col. 7, line 41- to col. 8, line 18).

Regarding claims 5, 11, Lindhorst-Ko clearly discloses in figures 1 and 2, the first route and the diverse alternate route provide connections to similar nodes.

3. Claims 6-9 and 12-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lindhorst-Ko U.S. patent no. 6,725,401 in view of Chaudhuri et al. U.S. patent no. 6,587,235 and further in view of Asano U.S. patent no. 6,240,102.

Regarding claims 6, 7, 12 and 13, Lindhorst-Ko and Chaudhuri differ from claimed invention in that Lindhorst-Ko and Chaudhuri do not specific disclose first physical link identifier and a second physical link identifier are implemented with a private network to network interface (PNNI) routing protocol. Asano discloses a private network to network interface (PNNI) routing protocol (col. 2, lines 37-45, col. 9, line 27 to col. 10, line 55). Since it is well known in the art to determine the route of a connection on the basic of signaling protocol called the private network to network interface (PNNI). Therefore, it would have been obvious to an artisan at the time of the invention was made to incorporate a private network to network interface (PNNI) routing protocol of Asano in the system of Lindhorst-Ko and Chaudhuri in order to exchange the routing information among the nodes.

Regarding claims 8, 9, 14 and 15, Asano further discloses a system having a horizontal link information group and a capacities information group (figures 15, 16, col. 13, lines 4-15).

4. Applicant's arguments with respect to claims 1, 4-16, 18-20, 22-24 and 26-27 have been considered but are moot in view of the new ground(s) of rejection.

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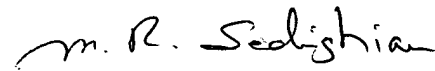
Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dzung D Tran whose telephone number is (571) 272-3025. The examiner can normally be reached on 9:00 AM - 7:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571) 272-3022. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DT
1/28/2005


M. R. SEDIGHIAN
PRIMARY EXAMINER